

INTEGRALLY FIRED, LAMINATED
ELECTROMECHANICAL TRANSDUCING ELEMENT

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ABSTRACT OF THE DISCLOSURE

10 An integrally fired, laminated electromechanical
transducing element, fabricated using an inexpensive
electrode material and having the electrode
characteristic at least equivalent to that of the Ag-Pd
electrode, is disclosed. Especially, in the integrally
fired, laminated electromechanical transducing element
15 according to the invention, (A) the rigidity of the
internal electrode layers is low and the internal stress
generated at the time of expansion or contraction of the
ceramic layers is small, (B) the antimigration
characteristic is superior, (C) the charge loss is small,
20 the heat conductivity is high and the heat radiation
characteristic is superior, and/or (D) the bonding
strength between the ceramic layers and the electrode
layers is high. The integrally fired, laminated
electromechanical transducing element (1) according to
25 the invention comprises, for example, an integrally fired
laminate member fabricated by integrally firing a
plurality of the ceramic layers (11) of piezoelectric
ceramic or electrostrictive ceramic and the internal
electrode layers (21, 22) interposed between the ceramic
30 layers (11). The main component of the internal
electrode layers (21, 22) is a base metal having a
rigidity of not more than 160 GPa.